AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for analyzing pressure-signals derivable from pressure measurements on or in a body of a human being or animal, comprising the steps of sampling said signals at specific intervals, and converting the pressure-signals into pressure related digital data with a time reference,

wherein for ~~a selected~~ selectable time ~~sequence~~ sequences the method comprises the further steps of:

a) identifying from said digital data the single pressure waves in said pressure-signals,

~~b) computing absolute mean pressure for said single pressure waves,~~

~~c)~~ b) computing single pressure wave related parameters of said single pressure waves, selected from:

- absolute mean pressure,
- amplitude,
- latency, and
- rise time coefficient,

~~d)~~ c) identifying numbers of single pressure waves with pre-selected parameter values of such waves with respect to said parameters such as absolute mean pressure, amplitude, latency and rise time coefficient,

~~e)~~ d) plotting the numbers of occurrences of single pressure waves with pre-selected values of amplitude and latency in a first matrix, determining balanced position of amplitude and

latency combinations in said first matrix, and presenting the balanced positions obtained as numerical values or as related to weighted values,

and/or

~~f)~~ e) plotting the numbers of occurrences of single pressure waves with pre-selected values of rise time coefficients in a second matrix, determining balanced positions of ruse time coefficients in said second matrix, and presenting the balanced positions obtained as numerical values or as related to weighted values.

2. (Currently Amended) A method according to claim 1, wherein said method is applied to continuous pressure-signals during said ~~selected time sequence.~~ selectable time sequences.

3. (Currently Amended) A method according to claim 2, wherein said ~~selected time sequence~~ selectable time sequences lies in the range 5 -15 seconds.

4. (Original) A method according to claim 2 or 3, wherein single pressure waves occurring between two time sequences are included in one or the other of said two time sequences according to pre-selected criteria.

5. (Original) A method according to claim 2, wherein a continuous series of said selected time sequences constitutes a continuous pressure recording period.

6. (Original) A method according to claim 5, wherein any of said selected time sequences are accepted or rejected for further analysis according to selected criteria.

7. (Original) A method according to claim 1, comprising the further steps of applying the method to all continuous pressure-signals for each of said time sequences in a continuous series of said time sequences during a continuous measurement period.

8. (Original) A method according to claim 1, wherein said identifying step includes determination of all minimum (valleys) and maximum (peak) pressure values in said signal.

9. (Original) A method according to claim 1, wherein said identifying step of single pressure waves relates to identifying a minimum pressure value (P_{min}) related to a diastolic minimum value and a maximum pressure value (P_{max}) related to a systolic maximum value of said single pressure wave.

10. (Original) A method according to claim 1, wherein said identifying step of single pressure waves includes determination of a minimum-maximum (P_{min}/P_{max}) pair of said single pressure wave.

11. (Original) A method according to claim 1, wherein said identifying step includes determining at least one of the single pressure wave parameters related to correct minimum-

maximum pressure (P_{min}/P_{max}) pairs, said parameters selected from the group of: amplitude (ΔP), latency (ΔT), and rise time coefficient ($\Delta P/\Delta T$).

12. (Original) A method according to claim 1, wherein said single pressure wave amplitude relates to pressure amplitude = ΔP = systolic maximum value (P_{max}) - diastolic minimum value (P_{min}).

13. (Original) A method according to claim 1, wherein said single pressure wave latency relates to time latency = ΔT = time sequence wherein pressures increases from diastolic minimum pressure (P_{min}) to systolic maximum pressure (P_{max}).

14. (Original) A method according to claim 1, wherein said single pressure rise time coefficient relates to the relationship $\Delta P/\Delta T$ between amplitude ΔP and latency ΔT.

15. (Original) A method according to claim 1, wherein said identifying step includes exclusion of minimum-maximum pressure (P_{min}/P_{max}) pairs with either amplitude (ΔP), latency (ΔT) or rise time coefficient ($\Delta P/\Delta T$) values outside pre-selected thresholds.

16. (Original) A method according to claim 1, wherein said single pressure wave parameters elected from the group of: amplitude (ΔP), latency (ΔT) and rise time coefficients ($\Delta P/\Delta T$) are relative values only and independent of any zero pressure level.

17. (Original) A method according to claim 9, wherein said systolic maximum pressure value (P_{max}) is one of three peak values occurring in said single pressure wave.

18. (Original) A method according to claim 17, wherein

- a first (P1) of said three peak values in said single pressure wave has an amplitude related to the top of the percussion wave,

- a second (P2) of said three peak values has an amplitude related to a tidal wave portion of said single pressure wave, and

- a third (P3) of said three peak values has an amplitude related a dichrotic wave portion of said single pressure wave.

19. (Original) A method according to claim 17 or 18 further comprising the step of calculating one or more rise time coefficients $\Delta P/\Delta T$ based on a ratio between said amplitude and latency values.

20. (Original) A method according to claim 1, wherein absolute mean pressure for each individual of said single pressure waves relates to mean pressure during the time of the pressure waveform, i.e. from diastolic minimum pressure (P_{min}) to diastolic minimum pressure (P_{min}).

21. (Original) A method according to claim 20, wherein mean pressure for an individual single pressure wave is the sum of pressure levels within said pressure wave divided by numbers of pressure samples.

22. (Original) A method according to claim 20, wherein mean pressure for an individual single pressure wave is the area under a curve (AUC) for said single pressure wave.

23. (Currently Amended) A method according to claim 1, wherein absolute mean pressure for said ~~selected time sequence~~ <u>selectable time sequences</u> is the sum of absolute mean pressure (wavelength P_{min} -P_{min}) for all individual single pressure waves during said time sequence divided by the numbers of single pressure waves within said identical time sequence.

24. (Original) A method according to claim 1, wherein absolute mean pressure of single pressure waves relates to absolute pressure relative to atmospheric pressure.

25. (Original) A method according to claim 1, wherein single pressure waves are rejected when absolute pressure values of single pressure wave diastolic minimum pressure (P_{min}) and systolic maximum pressure (P_{max}) of said single waves are outside selected threshold values.

26. (Original) A method according to claim 1, wherein heart rate during said time sequence is equal to numbers of single pressure waves during said time sequence divided by the duration of said time sequence.

27. (Original) A method according to claim 1, wherein heart rate during said time sequence is equal to numbers of single pressure waves during said time sequence divided by the sum of wavelengths (P_{min} - P_{min}) for all of said individual single pressure waves during said time sequence.

28. (Original) A method according to claim 1, wherein a time sequence of pressure recordings is accepted or rejected according to single pressure wave related parameters within said time sequence.

29. (Original) A method according to claim 28, wherein said time sequence is of a duration in the range 5 - 15 seconds.

30. (Original) A method according to claim 28, wherein a time sequence is rejected when standard deviation of absolute pressures of minimum/maximum (P_{min}/P_{max}) pair values of said single pressure waves is outside selected threshold values.

31. (Original) A method according to claim 28, wherein a time sequence is rejected when standard deviation of one or more of single pressure wave parameters selected from the group of: amplitude (ΔP), latency (ΔT) and rise time coefficient ($\Delta P/\Delta T$) is outside selected threshold values.

32. (Original) A method according to claim 28, wherein a time sequence is rejected when the number of single pressure waves within said time sequence is outside a selected threshold value.

33. (Original) A method according to claim 28, wherein a time sequence is rejected when single pressure wave derived heart rate for said time sequence is outside a selected threshold value.

34. (Original) A method according to claim 28, wherein a time sequence is rejected when the number of single pressure waves for said time sequence deviates outside selected values, as compared to the number of single pressure waves derived from another pressure recorded during identical time sequence with identical time reference.

35. (Original) A method according to claim 28, wherein a time sequence is rejected when single pressure wave derived heart rate for said time sequence deviates outside selected values,

as compared to single pressure wave derived heart rate from another pressure recorded during identical time sequence with identical time reference.

36. (Original) A method according to claim 28, wherein a time sequence is rejected when single pressure wave derived heart rate for said time sequence deviates outside selected values, as compared to heart rate derived from other source.

37. (Original) A method according to claim 36, wherein said other source is pulse oxymetry or electrocardiography.

38. (Original) A method according to anyone of claims 28 -37, wherein said rejection or acceptance of time sequences is performed repeatedly during ongoing pressure measurements.

39. (Original) A method according to anyone of claims 28 - 37, wherein a log is made for accepted and rejected time sequences during a recording period.

40. (Original) A method according to claim 1, comprising the further step of creating a matrix based on determination of a number of single pressure waves with pre-selected values related to one or more single pressure wave related parameters, and indicating for each matrix cell at respective intersections in said first and/or second matrix the number of occurrence of matches between specific parameters of said single pressure waves.

41. (Original) A method according to claim 40, wherein a matrix is created based on determining numbers of single pressure waves with pre-selected values related to amplitude (ΔP) and latency (ΔT), wherein one axis of the first matrix is related to an array of pre-selected values of pressure amplitude (ΔP), wherein the other axis in said first matrix is related to an array of pre-selected latencies (ΔT), and wherein indicating for each matrix cell at respective intersections in said matrix a number of occurrence of matches between a specific pressure amplitude (ΔP) and a specific latency (ΔT) related to successive measurements of single pressure waves over said time sequence.

42. (Original) A method according to claim 40, wherein a matrix is created based on determining numbers of single pressure waves with pre-selected values related to rise time coefficient ($\Delta P/\Delta T$), wherein one axis of the second matrix is related to an array of pre-selected values of rise time coefficient ($\Delta P/\Delta T$), and wherein each cell in said second matrix there is indicated occurrence of pre-selected rise time coefficients ($\Delta P/\Delta T$) related to successive measurements of single pressure waves over said tune sequence.

43. (Original) A method according to claim 40, wherein the single pressure wave parameters are categorized into groups, said groups reflecting ranges of said single wave parameter values.

44. (Original) A method according to anyone of claims 40 - 43, wherein reiterated updating of said matrix is made during said time sequence and during ongoing measurements taken within a measurement period.

45. (Original) A method according to claim 44, wherein said reiterated updating occurs in a time range of every 5 -15 seconds.

46. (Previously Presented) A method according to claim 40, wherein said matrixes are computed for each consecutive time sequence in a series of repeated time sequences.

47. (Currently Amended) A method according to ~~anyone of claims 40-42,~~ claim 40, wherein the occurrence of matches in said matrix is indicated through actual number or standardisation based number of matches during the specific measurement period.

48. (Currently Amended) A method according to ~~anyone of claim 40-42,~~ claim 40, wherein the occurrence of matches is indicated through percentage of matches during the specific measurement period.

49. (Currently Amended) A method according to ~~anyone of claim 40-42,~~ claim 40, wherein said standardisation of said numbers or percentages of occurrence of matches is a function of the length of the specific measurement period.

50. (Original) A method according to claim 47, wherein said standardisation is related to wavelength of a single pressure wave (heart rate).

51. (Original) A method according to claim 1, comprising the further step of computing balanced position for a number of occurrences of said single pressure wave amplitude (ΔP) and latency (ΔT) values in said first matrix.

52. (Original) A method according to claim 51, wherein balanced position of said first matrix of numbers of amplitude (ΔP) and latency (ΔT) combinations relates to mean frequency distribution of amplitude (ΔP) and latency (ΔT) combinations during said time sequence.

53. (Original) A method according to claim 1, wherein balanced position is computed for number of occurrences of said single pressure wave rise time coefficient ($\Delta P/\Delta T$) values in said second matrix.

54. (Original) A method according to claim 53, wherein said balanced position of said second matrix numbers of rise time coefficient ($\Delta P/\Delta T$) relates to mean frequency distribution of rise time coefficients ($\Delta P/\Delta T$) during said selected time sequence.

55. (Previously Presented) A method according to claim 51, wherein reiterated computation of said matrix balanced position within said time sequence is made during ongoing measurements taken over a measurement period.

56. (Previously Presented) A method according to claim 51, wherein a new matrix balanced position is computed for each time sequence in a consecutive series of said time sequences during ongoing measurements taken over a measurement period.

57. (Previously Presented) A method according to claim 55, wherein said reiterated updating is made in a time range of every 5-15 seconds.

58. (Previously Presented) A method according to claim 51, wherein balanced position of numbers of occurrences in said first or second matrix is presented as numerical values or as weighted values.

59. (Original) A method according to claim 1, wherein the method further comprising the steps of:

storing said single pressure wave related digital data in a database,

relating said set of digital data to a given time sequence,

relating said set of digital data to individual time sequences in a continuous series of said time sequences.

60. (Currently Amended) A method according to claim 59, wherein said single pressure wave related digital data stored in said database include at least one of the following feature items:

- a) absolute pressure values for diastolic minimum pressure (P_{min}) value of each accepted P_{min}/P_{max} pair within said time sequence,

- b) absolute pressure values for systolic maximum pressure (P_{max}) value of each accepted P_{min}/P_{max} pair within said time sequence,

- c) absolute mean pressure for each individual single pressure wave, that is mean pressure from P_{min} to P_{min} (wavelength) of each individual single pressure wave within said time sequence,

- d) relative amplitude (ΔP) pressure value for each individual single pressure wave within said time sequence,

- e) relative latency (ΔT) value for each individual single pressure wave within said time sequence,

- f) relative rise time ~~($\Delta P/\Delta T$)~~ coefficient ($\Delta P/\Delta T$) for each individual single pressure; wave within said time sequence,

- g) ~~numbers~~ number of single pressure waves within said time sequence,

- h) single pressure wave derived heart rate, computed as number of single pressure waves divided by the total duration of wavelengths (P_{min} to P_{min}) of single pressure waves within said time sequence,

- i) single pressure wave derived heart rate, computed as number of single pressure waves divided by the duration of said time sequence wherein said single pressure waves occur,

- j) mean of absolute mean pressure value for all individual single pressure waves (wavelength P_{min} - $P_{min,}$) occurring within said time sequence, computed as the sum of absolute mean pressure (wavelength P_{min} - P_{min}) for all individual single waves during said time sequence, divided by numbers of single pressure waves within said time sequence,

- k) standard deviation for absolute mean pressure values of all individual single ~~30~~ pressure waves within said time sequence,

- l) standard deviation for diastolic minimum pressure (P_{min}) values of all individual single waves within said time sequence,

- m) standard deviation for systolic maximum pressure (P_{max}) values of all individual single waves within said time sequence,

- n) standard deviation for pressure amplitude (ΔP) values for all individual single pressure waves within said time sequence,

- o) standard deviation for relative latency (ΔT) values of all individual single pressure waves within said time sequence,

- p) standard deviation for relative rise time ~~($\Delta P/\Delta T$)~~ coefficient <u>($\Delta P/\Delta T$)</u> values of all individual single pressure waves within said time sequence,

- q) balanced position of amplitude (ΔP)/latency (ΔT) combinations within said first matrix of combinations of single pressure wave amplitude (ΔP) and latency (ΔT) values within said time sequence, and

- r) balanced position of rise-time ~~(ΔP/ΔT)~~ coefficients <u>(ΔP/ΔT)</u> within said second matrix of single pressure wave rise-time ~~(ΔP/ΔT)~~ coefficients <u>(ΔP/ΔT)</u> within said time sequence.

61. (Original) A method according to claim 60, wherein said time sequence is in the range of 5 - 15 seconds.

62. (Original) A method according to claim 60, wherein the method further comprises the steps of:

- storing said single pressure wave related digital pressure data on a computer readable medium, and

- providing graphical presentations and statistical analysis of differences or relationships within or between any of said single pressure wave related digital pressure data.

63. (Previously Presented) A method according to claim 59, wherein differences or relationships between any of the single pressure wave related digital pressure data stored in said database are analyzed statistically.

64. (Previously Presented) A method according to claim 59, wherein said statistical analysis includes plotting of differences of values of said single wave parameters between different pressures with identical time sequence and identical time reference.

65. (Original) A method according to claim 64, wherein said differences relate to differences of absolute mean pressure between different pressures with identical time sequences and identical time reference.

66. (Original) A method according to claim 64, wherein said differences relate to differences of balanced position of amplitude (ΔP) between different pressures with identical time sequences and identical time reference.

67. (Original) A method according to claim 64, wherein said differences relate to differences of balanced position of latency (ΔT) between different pressures with identical time sequences and identical time reference.

68. (Original) A method according to claim 64, wherein said differences relate to differences of rise time coefficients between different pressures with identical time sequences and identical time reference.

69. (Previously Presented) A method according to claim 62, wherein said statistical analysis includes plotting of single wave parameters in scatter plots wherein each axis refers to one or said single pressure wave parameters.

70. (Previously Presented) A method according to claim 59, wherein absolute mean pressure during said time sequence is related to balanced position of amplitude (ΔP) during said identical time sequence.

71. (Previously Presented) A method according to claim 59, wherein absolute mean pressure during said time sequence is related to balanced position of latency (ΔT) during said identical time sequence.

72. (Currently Amended) A method according to ~~anyone of claims 59 – 64,~~ claim 59, wherein balanced position of amplitude (ΔP) during said time sequence is related to balanced position of latency (ΔT) during said identical time sequence.

73. (Previously Presented) A method according to claim 63, wherein a best fitted curve or equation is established for any relationships of said single pressure wave related parameters.

74. (Original) A method according to claim 73, wherein the best fitted curve or equation relates to ranges for said single pressure wave related parameters.

75. (Previously Presented) A method according to claim 1, wherein a best fitted curve or equation is made on the basis of individual pressure recordings, said individual pressure recording built up of a continuous series of said time sequences.

76. (Previously Presented) A method according to claim 1, wherein a total best fitted curve or equation is made on the basis of two or more of said individual pressure recordings.

77. (Original) A method according to claim 75 or 76, wherein a mean type of best fitted curve or equations is made from two or more of said individual pressure recordings.

78. (Previously Presented) A method according to claim 74, wherein said individual pressure recordings are included in determining said total best fitted curve or equation according to selectable criteria, said selectable criteria related to distribution of single pressure wave related parameters within said individual pressure recording.

79. (Previously Presented) A method according to claim 1, wherein best fitted equations for different single pressure wave parameter relationships are combined.

80. (Currently Amended) A method according to claim 79, wherein one single pressure wave related parameter is determined as a function of two or more other single pressure ~~wave 5~~ wave related parameters.

81. (Previously Presented) A method according to claim 1, wherein mean pressure for said individual time sequence is determined as a function of balanced position of amplitude and latency within said identical time sequence.

82. (Original) A method according to anyone of claims 1, and 59 and 60, wherein the method further comprising the steps of giving weights to the cells of a matrix of single pressure wave related parameters, said weights determined by relationships between said single pressure wave related parameters.

83. (Original) A method according to claim 82, wherein the method further comprises the steps of:

creating a matrix based on single pressure wave related digital data,

indicating at each cell at respective intersections in said matrix number of occurrence of matches between specific parameters of said single pressure waves, weighting each cell in said matrix to give a weighted value,

said weighting comprising the steps of:

- computing for individual pressure recordings relationships between single pressure wave parameters including the single pressure wave parameters represented in said matrix,

- computing for a plurality of individual pressure recordings relationships between single pressure wave parameters including the single wave parameters represented in said matrix,

- computing an equation in which the weighted value is a function of the single wave parameters included in the matrix,

- providing each cell in said matrix with a weighted value according to said equation, the input values in said equation being the column and row group midpoints of said matrix, and

- presenting any occurrence of matches between specific parameters of said single pressure waves within a particular matrix cell as the weighted value of said matrix cell.

84. (Currently Amended) A method according to claim 83, comprising the further steps of:

creating a matrix based on determining number of single pressure waves with pre-selected values related to amplitude (ΔP) and latency (ΔT), one axis of the matrix, being related to an array of pre-selected values of pressure amplitude (Δ P), and the other axis being related to an array of pre-selected latencies (ΔT),

indicating at each cell at respective intersections in said matrix number of occurrence of matches between specific combinations of single pressure wave amplitude (ΔP) and latency (ΔT) related to successive measurements of single pressure waves within a time sequence, and weighting each cell in said matrix to provide a weighted value related to mean pressure during said time sequence,

said weighting of the matrix cells comprising the steps of:

- computing for individual pressure recordings or a plurality of individual pressure recordings the best fitted equation for a relationship between absolute mean pressure and balanced position of single pressure wave amplitude (ΔP) within said ~~25~~ time sequences,

- computing for individual pressure recordings or a plurality of individual pressure recordings the best fitted equation for a relationship between balanced position of single pressure wave amplitude (ΔP) and balanced position of single pressure wave latency (ΔT) within said time sequences,

- computing for individual pressure recordings or a plurality of individual pressure recordings the best fitted equation for the relationship between absolute mean pressure, and balanced position of single pressure wave amplitude (ΔP) and balanced position of single pressure wave latency (ΔT) within said time sequences,

- computing for individual pressure recordings or a plurality of individual pressure recordings an equation for the relationship between absolute mean pressure as a function of balanced position of single pressure wave amplitude (ΔP) and balanced position of single pressure wave latency (ΔT) within said time sequences,

- computing for each cell in said matrix a mean pressure value derivable from the equation in which mean pressure is a function of balanced position of single pressure wave amplitude (ΔP) and balanced position of single pressure wave latency (ΔT) within said time sequences,

said amplitude (ΔP) and latency (ΔT) values put into the equation being made according to selected criteria, such as the midpoint of the amplitude (ΔP) and latency (ΔT) group values,

and

- reiterating the step of determining weighted scale values for all cells within said matrix.

85. (Original) A method according to claim 84, wherein said criteria is midpoint of the amplitude (ΔP) and latency (ΔT) group values.

86. (Previously Presented) A method according to claim 83, wherein matrix cells are given a value represented as a function of parameters of the matrix columns and rows.

87. (Previously Presented)) A method according to claim 83, wherein all matrix cells of an amplitude (ΔP)/latency (ΔT) matrix are represented by mean pressure values, said mean pressure values being a function of balanced positions of amplitude (ΔP) and latency (ΔT) values, said mean pressure values termed predicted mean pressure.

88. (Previously Presented) A method according to claim 83, wherein matrix cells of an amplitude (ΔP)/latency (ΔT) matrix are represented by selected colors corresponding to the mean pressure values of said matrix cells.

89. (Previously Presented) A method according to claim 83, wherein the two-dimensional balanced position of amplitude (ΔP) and latency (ΔT) within a given time sequence is represented by a one-dimensional weight scale number.

90. (Original) A method according to claim 55, further wherein reiterated updates of balanced positions of amplitude and latency values correspond to reiterated updates of a weighted number of said balanced positions, and wherein the weighted values are the mean pressure values termed predicted mean pressure values.

91. (Original) A method according to claim 55, further wherein reiterated updates of balanced positions of amplitude and latency combinations as weighted numbers are made against time, said balanced position being plotted as weighted scale number against time in a trend plot during ongoing pressure measurements.

92. (Previously Presented) A method according to claim 55, further wherein reiterated updates of balanced positions of amplitude and latency combinations as weight numbers during said time sequence are presented as weighted values and presented in a histogram.

93. (Original) A method according to claim 1, wherein said analysis of pressure-signals is related to human or animal body pressure elected from one or more of: intracraniail pressure, arterial blood pressure, cerebrospinal fluid pressure, cerebral perfusion pressure, ocular pressure, gastrointestinal pressure, urinary tract pressure, or any type of soft tissue pressure.

Claims 94-109 (Cancelled)

110. (New) A method for analyzing pressure signals derivable from pressure measurements on or in a body of a human being or animal, comprising the steps of:

sampling said signals at specific intervals, and

converting thus sampled pressure signals into pressure-related digital data with a time reference,

wherein for selectable time sequences the method comprises the further steps of:

a) identifying from said digital data single wave parameters,

b) determining from said digital data time sequence parameters,

c) applying to said identified single wave parameters and determined time sequence parameters criteria for thresholds and ranges of said single wave parameters and time sequence parameters,

d) using said criteria for thresholds and ranges to provide for identification of single pressure waves related to cardiac beat-induced pressure waves and pressure waves caused by artifact-induced pressure waves or a combination thereof.

111. (New) A method according to claim 110, wherein each of said selectable time sequences is a selected time duration of said pressure-related digital data with a time reference.

112. (New) A method according to claim 111, wherein said selected duration lies in the range 5 -15 seconds.

113. (New) A method according to claim 110, wherein the method is applied to each of said selectable time sequences in a continuous series of said time sequences during a recording.

114. (New) A method according to claim 110, wherein said identifying step a) includes identification of peaks and valleys in said sampled signal.

115. (New) A method according to claim 114, wherein all minimum and maximum values are identified and represented with an amplitude value and a location value or time stamp.

116. (New) A method according to claim 110, wherein said identifying step a) includes identification of included pair combinations of peaks and valleys in said sampled signal.

117. (New) A method according to claim 110, wherein said identifying step a) includes identification of included pair combinations of valleys and peaks in said signal, corresponding to included pair combinations of diastolic minimum pressure (P_{min}) and systolic maximum pressure (P_{max}), characterizing single pressure waves created by the cardiac beat-induced pressure waves.

118. (New) A method according to claim 110, wherein said identifying step a) includes identification of at least one of the single pressure wave parameters during said selected time sequences, said parameters selected from the group of:

- starting diastolic minimum pressure defining the start of the single pressure wave (P_{min}),

- ending diastolic minimum pressure defining the end of the single pressure wave (P_{min}),

- systolic maximum pressure of the single pressure wave (P_{max}),

- amplitude of the single pressure wave (ΔP),

- latency of the single pressure wave (ΔT),

- rise time coefficient of the single pressure wave ($\Delta P/\Delta T$),

- wavelength of the single pressure wave.

119. (New) A method according to claim 118, wherein the ending diastolic minimum pressure (P_{min}) defines an end of a first single pressure wave which is same as starting diastolic minimum pressure (P_{min}) defining the start of the subsequent second single pressure wave.

120. (New) A method according to claim 118, wherein the ending diastolic minimum pressure (P_{min}) defines an end of a first single pressure wave which is not the same as starting diastolic minimum pressure (P_{min}) defining the start of the subsequent second single pressure wave.

121. (New) A method according to claim 118, wherein said amplitude of the single pressure wave (ΔP) equals the pressure difference when pressures increase from starting diastolic minimum pressure (P_{min}) to systolic maximum pressure (P_{max}).

122. (New) A method according to claim 118, wherein latency of the single pressure wave (ΔT) equals the time interval of the single wave when the pressures change from starting diastolic minimum pressure (P_{min}) to systolic maximum pressure (P_{max}).

123. (New) A method according to claim 118, wherein rise time coefficient ($\Delta P/\Delta T$) of the single pressure wave relates to amplitude of the single pressure wave (ΔP) divided by latency (ΔT) of the single pressure wave.

124. (New) A method according to claim 118, wherein wavelength of each individual of said single pressure waves relates to the duration of the single pulse pressure wave between the diastolic minimum pressure (P_{min}) representing the start of the wave and the diastolic minimum pressure (P_{min}) representing the end of the wave.

125. (New) A method according to claim 110, wherein said determining step b) includes determining at least one of the time sequence parameters during said individual time sequence, said parameters selected from the group of:

- number of single waves (N_{SW}),

- single pressure wave derived heart rate,

- absolute mean pressure,

- standard deviation for mean pressure of mean pressure for the individual single waves,

- standard deviation for diastolic minimum (P_{min}),

- standard deviation for systolic maximum (P_{max}),

- standard deviation for amplitude (ΔP) of all individual single pressure waves,

- standard deviation for latency (ΔT) of all individual single pressure waves,

- standard deviation for rise time coefficient ($\Delta P/\Delta T$) of all individual single pressure waves,

- balanced position of amplitude (ΔP)/latency (ΔT) combinations,

- balanced position of rise time coefficients ($\Delta P/\Delta T$).

126. (New) A method according to claim 125, wherein said single pressure wave derived heart rate is computed as the number of single pressure waves divided with the total duration of wavelengths (P_{min} to P_{min}) of single pressure waves within said time sequence.

127. (New) A method according to claim 125, wherein said single pressure wave derived heart rate is computed as numbers of single pressure waves divided by the duration of said time sequence in which said single pressure waves occur.

128. (New) A method according to claim 125, wherein said absolute mean pressure is computed as the sum of absolute mean pressure (entire wavelength from P_{min} to P_{min}) for all

individual single waves during said time sequence, divided by the number of single waves within said time sequence.

129. (New) A method according to claim 125, wherein said balanced position of amplitude (ΔP)/latency (ΔT) combinations refers to the mean frequency distribution of single wave amplitude (ΔP)/latency (ΔT) combinations during said time sequences.

130. (New) A method according to claim 125, wherein said balanced position of amplitude (ΔP)/latency (ΔT) combinations is computed in a first matrix of number of occurrences of amplitude (ΔP) and latency (ΔT) values for all individual single pressure waves during said time sequence.

131. (New) A method according to claim 125, wherein said balanced position of rise time coefficients ($\Delta P/\Delta T$) refers to the mean frequency distribution of single wave rise time coefficients ($\Delta P/\Delta T$) during said time sequences.

132. (New) A method according to claim 125, wherein said balanced position of rise time coefficients ($\Delta P/\Delta T$) is computed in a second matrix of number of occurrences of rise time coefficient ($\Delta P/\Delta T$) values for all individual single pressure waves during said time sequence.

133. (New) A method according to claim 110, wherein said step c) includes use of criteria for thresholds and ranges of said single pressure wave parameters of said single pressure waves during said time sequences, said parameters selected from the group of:

- diastolic minimum pressure defining the start of the single pressure wave (P_{min}),

- ending diastolic minimum pressure defining the end of the single pressure wave (P_{min}),

- systolic maximum pressure of the single pressure wave (P_{max}),

- amplitude (ΔP) of the single pressure wave,

- latency (ΔT) of the single pressure wave,

- rise time coefficient ($\Delta P/\Delta T$) of the single pressure wave,

- wavelength of the single pressure wave.

134. (New) A method according to claim 133, wherein said criteria for thresholds and ranges of said single pressure wave parameters determines accepting or rejecting said single pressure waves for further analysis.

135. (New) A method according to claim 133, wherein said criteria for thresholds and ranges of said single pressure wave parameters exclude minimum-maximum pressure (P_{min}/ P_{max}) pairs with said single pressure wave parameters outside selectable thresholds and ranges.

136. (New) A method according to claim 110, wherein said step c) includes use of criteria for thresholds and ranges of said time sequence parameters during said time sequence windows, said parameters selected from the group of:

- number of single waves (N_{SW}),

- single pressure wave derived heart rate,

- absolute mean pressure,

- standard deviation for mean pressure of mean pressure for the individual single waves,

- standard deviation for diastolic minimum (P_{min}),

- standard deviation for systolic maximum (P_{max}),

- standard deviation for amplitude (ΔP) of all individual single pressure waves,

- standard deviation for latency (ΔT) of all individual single pressure waves,

- standard deviation for rise time coefficient ($\Delta P/\Delta T$) of all individual single pressure waves,

- balanced position of amplitude (ΔP)/latency (ΔT) combinations,

- balanced position of rise time coefficients ($\Delta P/\Delta T$).

137. (New) A method according to claim 136, wherein said criteria for thresholds and ranges of said time sequence parameters of said single pressure waves during said time sequences determines accepting or rejecting said time sequences for further analysis.

138. (New) A method according to claim 110, wherein said identifying step a), determining step b) and step c) enables optimal identification of single pressure waves related to

cardiac beat-induced pressure waves and identification of pressure waves related to artifacts or a combination of artifacts and cardiac beat-induced pressure waves.

139. (New) A method according to claim 110, wherein said continuous pressure-related signals relate to single pressure waves created by physiological cardiac beat-induced pressure waves.

140. (New) A method according to claim 110, wherein said identifying step a) and determining step b) further include selecting single pressure waves which occur between two consecutive ones of said time sequences and placing such waves in one or the other of said two consecutive individual time sequences according to selected criteria.

141. (New) A method according to claim 140, wherein said selected criteria define that a first one of said single pressure waves within said individual time sequence windows has its ending diastolic minimum pressure value (P_{min}) within said individual time sequence.

142. (New) A method according to claim 140, wherein said selected criteria define that a last of said single pressure waves within said individual time sequence must have both its starting (P_{min}) and ending (P_{min}) diastolic minimum pressure values within said individual time sequence window.

143. (New) A method for analyzing pressure signals derivable from pressure measurements on or in a body of a human being or animal, comprising the steps of sampling said signals at specific intervals, and converting thus sampled pressure signals into pressure-related digital data with a time reference,

wherein for selectable time sequences the method comprises the further steps of:

a) identifying from said digital data single pressure waves related to cardiac beat-induced pressure waves,

b) computing time sequence parameters of said single pressure waves during individual of said time sequences, and

c) establishing an analysis output selected from one or more of said time sequence parameters of said single pressure waves during individual of said time sequences:

c1) balanced position of amplitude (ΔP)/latency (ΔT) combinations,

c2) balanced position of rise time coefficients ($\Delta P/\Delta T$),

c3) absolute mean pressure for said single pressure waves of said time sequence.

144. (New) A method according to claim 143, wherein each of said selectable time sequences is a selected time duration of said pressure-related digital data with a time reference.

145. (New) A method according to claim 144, wherein said selected time duration lies in the range 5 –15 seconds.

146. (New) A method according to claim 143, wherein the method is applied to each of said selectable time sequences in a continuous series of said time sequences during a recording.

147. (New) A method according to claim 143, wherein said identifying step a) includes identification of peaks and valleys in said sampled signal.

148. (New) A method according to claim 147, wherein all minimum and maximum values are identified and represented with an amplitude value and a location value or time stamp.

149. (New) A method according to claim 143, wherein said identifying step a) includes identification of included pair combinations of peaks and valleys in said signal.

150. (New) A method according to claim 143, wherein said identifying step a) includes identification of included pair combinations of valleys and peaks in said signal, corresponding to included pair combinations of diastolic minimum pressure (P_{min}) and systolic maximum pressure (P_{max}), characterizing single pressure waves created by the cardiac beat-induced pressure waves.

151. (New) A method according to claim 143, wherein said identifying step a) excludes for further analysis pressure waves during said time sequences with single pressure wave

parameters outside selected criteria for thresholds and ranges of said parameters, said parameters selected from the group of:

- starting diastolic minimum pressure defining the start of the single pressure wave (P_{min}),
- ending diastolic minimum pressure defining the end of the single pressure wave (P_{min}),
- systolic maximum pressure of the single pressure wave ($P_{max,}$),
- amplitude (ΔP) of the single pressure wave,
- latency (ΔT) of the single pressure wave,
- rise time coefficient ($\Delta P/\Delta T$) of the single pressure wave,
- wave duration of the single pressure wave, and
- absolute mean pressure of said single pressure wave.

152. (New) A method according to claim 143, wherein said identifying step a) includes for further analysis single pressure waves having single pressure wave parameters within selected criteria for thresholds and ranges of said single pressure wave parameters.

153. (New) A method according to claim 143, wherein said identifying step a) excludes for further analysis time sequences with time sequence parameters outside selected criteria for thresholds and ranges of said parameters, said parameters selected from the group of:

- number of single waves (N_{SW}),

- single pressure wave derived heart rate,

- absolute mean pressure,

- standard deviation for mean pressure of mean pressure for the individual single waves,

- standard deviation for diastolic minimum (P_{min}),

- standard deviation for systolic maximum (P_{max}),

- standard deviation for amplitude (ΔP) of all individual single pressure waves,

- standard deviation for latency (ΔT) of all individual single pressure waves,

- standard deviation for rise time coefficient ($\Delta P/\Delta T$) of all individual single pressure waves,

- balanced position of amplitude (ΔP)/latency (ΔT) combinations,

- balanced position of rise time coefficients ($\Delta P/\Delta T$).

154. (New) A method according to claim 143, wherein said identifying step a) includes for further analysis time sequences having time sequence parameters within selected criteria for thresholds and ranges of said time sequence parameters.

155. (New) A method according to claim 143, wherein said identifying step a) is applied to each consecutive time sequence in a continuous series of time sequences of a signal.

156. (New) A method according to claim 143, wherein said identifying step a) further includes selecting single pressure waves which occur between two consecutive of said time sequences and placing such waves in one or the other of said two consecutive individual time sequences according to selected criteria.

157. (New) A method according to claim 156, wherein said selected criteria define that a first of said single pressure waves within said individual time sequence must have its ending diastolic minimum pressure value (P_{min}) within said individual time sequence.

158. (New) A method according to claim 156, wherein said selected criteria define that a last of said single pressure waves within said individual time sequence must have both its starting (P_{min}) and ending (P_{min}) diastolic minimum pressure values within said individual time.

159. (New) A method according to claim 143, wherein said computing step b) for accepted time sequences further includes determining said time sequence parameters, said parameters selected from the group of:

c1) balanced position of amplitude (ΔP)/latency (ΔT) combinations,

c2) balanced position of rise time coefficients ($\Delta P/\Delta T$),

c3) absolute mean pressure for said single pressure waves of said time sequence.

160. (New) A method according to claim 143, wherein said establishing step c) includes determining balanced position of amplitude (ΔP)/latency (ΔT) combinations, said determining comprising the steps of creating a first matrix based on determining number of single pressure waves with pre-selected values related to amplitude (ΔP) and latency (ΔT), one axis of said first matrix being related to an array of pre-selected values of pressure amplitude (ΔP) and the other axis of said first matrix being related to an array of pre-selected values of latencies (ΔT), and indicating for each matrix cell at respective intersections in said first matrix a number of occurrences of matches between a specific pressure amplitude (ΔP) and a specific latency (ΔT) related to successive measurements of single pressure waves over said individual time sequences.

161. (New) A method according to claim 160, wherein the single pressure wave parameters of amplitude (ΔP) and latency (ΔT) are categorized into groups, said groups reflecting ranges of said single wave parameter values.

162. (New) A method according to claim 160, wherein the occurrence of matches in said first matrix is indicated through actual number of matches during individual of said time sequence windows.

163. (New) A method according to claim 160, comprising the further step of computing balanced position for a number of occurrences of said single pressure wave parameters of amplitude (ΔP) and latency (ΔT) values during individual of said time sequences in said first matrix.

164. (New) A method according to claim 163, wherein said balanced position of said first matrix of numbers of amplitude (ΔP) and latency (ΔT) combinations corresponds to mean frequency distribution of the different occurrences of amplitude (ΔP) and latency (ΔT) during said individual time sequences.

165. (New) A method according to claim 143, wherein said establishing step c) includes determining balanced position of rise time coefficients ($\Delta P/\Delta T$), said determining comprising the steps of creating a second matrix based on determining number of single pressure waves with pre-selected values related to rise time coefficient ($\Delta P/\Delta T$), the axis in said second matrix being related to an array of pre-selected values of rise time coefficient ($\Delta P/\Delta T$), and wherein for each matrix cell in said second matrix indicating a number of occurrences of pre-selected rise time coefficients ($\Delta P/\Delta T$) related to successive measurements of single pressure waves during said individual time sequences.

166. (New) A method according to claim 165, wherein the single pressure wave parameter rise time coefficient ($\Delta P/\Delta T$) is categorized into groups, said groups reflecting ranges of said single wave ($\Delta P/\Delta T$) parameter values.

167. (New) A method according to claim 165, comprising the further step of computing balanced position for a number of occurrences of said single pressure wave parameter rise time coefficient ($\Delta P/\Delta T$) in said second matrix, to yield an analysis output.

168. (New) A method according to claim 167, wherein said balanced position of said second matrix of numbers of rise time coefficient ($\Delta P/\Delta T$) combinations corresponds to the mean frequency distribution of rise time coefficient ($\Delta P/\Delta T$) of said time sequence.

169. (New) A method according to claim 143, wherein said establishing step c) yields analysis output related to the absolute mean pressure for said single pressure waves of said time sequence, corresponding to the sum of mean pressure values for all individual single pressure waves during said time sequence divided by number of said individual single pressure waves during said individual time sequence.

170. (New) A method according to claim 169, wherein absolute mean pressure for an individual of said single pressure waves is the sum of sample values during the time of a wave duration, i.e. from starting diastolic minimum pressure (P_{min}) to ending diastolic minimum pressure (P_{min}) divided by number of samples.

171. (New) A method according to claim 143, wherein said establishing step c) yields output of analysis of parameters c1) – c3) during each individual of said time sequence windows in a continuous series of said time sequence windows of said pressure-related signal.

172. (New) A method according to claim 143, wherein the duration of each selectable time sequence window lies in a time range of 3 –15 seconds.

173. (New) A method according to claim 143, wherein establishing step c) yields output of analysis of one or more of said parameters c1) – c3), said analysis output being presented as numerical values on a display for each of said time sequences during ongoing sampling of said pressure-related signals.

174. (New) A method according to claim 143, wherein establishing step c) yields output of analysis of one or more of parameters c1) – c3), said analysis output being presented as histogram distribution of values of said parameters c1) – c3) for a selectable number of time sequence windows of said pressure-related signal.

175. (New) A method according to claim 143, wherein establishing step c) yields output of analysis of one or more of parameters c1) – c3), said analysis output being presented as a quantitative matrix for a selectable number of time sequences of said pressure-related signal.

176. (New) A method according to claim 175, wherein said quantitative matrix is created based on determining numbers of one of said parameters c1) – c3) with selected parameter values, wherein one axis of the quantitative matrix is related to an array of selected parameter values, wherein the other axis is related to an array of selected numbers of consecutive included time sequences, and wherein indicating for each matrix cell at respective intersections in said quantitative matrix a number of occurrence of matches between a specific parameter value and a specific number of time sequences.

177. (New) A method according to claim 176, wherein said parameter values are categorized into groups, said groups reflecting ranges of said parameter values.